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ALLEGIANCES

THE ANNIHILATION OF ANGKOR
APEIRON, Fred Saberhagen

THE LINGUIST, Tak Hallus

ROGER ZELAZNY



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*The only way to
know—is to go!*

MARSMAN MEETS THE ALMIGHTY

Don Trotter

THE IDEA FIRST came up at a beer and bull session at Jesse Weston's place. She and her husband, Ardee, had been down at the beach that afternoon, and Ardee had stuck his foot on a discarded pop top. He was sounding off at his usual length about where and when it had happened, how much it had hurt, how crowded the beach was, and wasn't it awful how much garbage was strewn about. That's the way he actually talked: 'strewn about'. He's an English lit. major. Jesse had been sitting there, her gray eyes wide, nodding occasionally, when she interrupted him:

"You know what would be funny?" She addressed us in general. Nobody responded. What Jesse had thought funny in the past had ranged from a five hundred pound granite facing-

block left in the kneehole of Thorsen's desk ("That way his feet'll reach the floor.") to arranging for every phone in the lab to ring with a loud, juicy raspberry. That is to say, a very narrow and very practical range. Seeing she wasn't going to proceed without a little prodding, I ventured:

"Not another quarter-ton tombstone, I hope. My hernias still twinge when I think about it."

She looked contemptuous. "That was trivial, and lacking in social significance. . . . No, picture this: It's a chilly day this December. All the world, or at least the hardened space-freaks, are huddled around their TV sets. We see through the eyes of Marsman I, who just fifteen minutes before has first set tread upon the ocher sands of Barsoom." (She pronounced it to rhyme with 'Bar Room'.) "Our eyes sweep the horizons of the Red Planet, then fix on a distant hill. Treads churn the crimson grit, propel us toward the summit. We reach the crest, and what confronts us on the other side?"

"Beer cans!"

"Miles of beer cans."

"Acres of pop top plants."

It was practically chorused. She'd telegraphed the punch line.

She looked pleased. "That's right. Wouldn't it be *perfect*?" She hugged her knees and grinned hugely at its absolute perfection.

Kim Sohn spoke up: "Better yet, if the whole place were paved over with black asphalt."

My turn: "Or even better, Marsman comes over the brow of the hill, and there's a little white cardboard sign, on a wooden stake. He rolls over to it, and it says: 'No Trespassing, by order of the owner, A.M. Thorsen'."

"In that icky orange ink of his." That was Stephanie, my wife.

"No, no, not a sign, a stone tablet." Kim's wife, Lee.

"Not a tablet, an engraved facing block." That was mine and brought the house down. Perhaps I should explain that Professor Albert Michaelson Thorsen is "boss" to Jesse, Kim and me, and that his vanity is exceeded only by his shortness. There's a sign on his door that says: 'A. M. Thorsen'. Someone years ago penciled in 'A.I.M.ighty' Thorsen. He never erased it.

Kim spoke thoughtfully: "You know, it might not be impossible."

Me: "Kim, do you know what the freight charges on five hundred pounds over 60 million miles would be?"

"Probably enough to recarpet the stadium. Twice. But you know that, besides monitoring Thorsen's life-detection experiment with it, they're using that gizmo of the Computer Science department's to process Marsman's return signal into, among

other things, real-time TV pictures." That 'gizmo' was the third largest computer in existence, and the biggest one that wouldn't have found capitalism terribly confusing. "It might be possible to alter the output slightly. I know a guy over there who'd love to help out on this, if it's possible." Kim 'knew a guy' just about every useful place there was.

"Call him, Kim, call him!" That was Jesse, looking about ten years old and as if she were having a tough time keeping from jumping up and down and clapping.

We were all just mellow enough for it not to seem unreasonable. Kim balanced his beer on top of a Vietnamese brass elephant, and went to use the phone.

While he was gone, I began to have second thoughts.

"You know, having his name come up like that on national TV would be pretty embarrassing for him." In spite of everything, all of us respected, and some of us even liked the little expletive.

Jesse snorted. "The little bantam will bask in it."

Lee came to my aid. "I think Hank's right, Jesse. Five minutes after Thorsen's name appeared there'd be a couple of dozen reporters badgering him. And they'd keep it up for weeks—you know how desperate for scandal they are."

Jesse wasn't that easily defeated. "Nuts, he'll love it."

"And it probably wouldn't do his academic reputation any good. You know how those things are, everybody'd think he'd done it himself for the publicity." I was back on the attack again.

"He probably would if he were to think of it."

My bright and beautiful bride had a suggestion. "Listen, how about if instead of something with Thorsen's name on it, Thorsen himself is there, maybe standing shaking his head at your pitiful notions like Hank says he does. That way it'd be harder to trace who it was and there'd be no question of hurting his academic standing."

"Well, that misses the beautiful symbolism, but you might be right about his academic reputation. Thorsen would sacrifice his first-born daughter before that."

Ardee stuck in his oar. "You're all aware that it would be purest vandalism if this scheme destroyed valuable data."

That sobered us a bit. No one had even considered that aspect of it. And it suggested something else to me.

"And has anyone thought about what happens if we get caught? Tampering with a project as expensive as this one is likely to rate more than a visit to the principal."

"But you're not really going to

do it are you, Hank," Stephanie wanted to know. "I mean, its fun to think about, but God!"

"I don't know if I am or not, but I'm betting that if it's possible Kim and Jesse are going to give it their damndest."

"You betcha," Jesse confirmed.

"I think Kim is looking on it as an interesting technical exercise." Lee turned to face me. "He probably hasn't considered Thorsen or what happens if we get caught."

"I notice you said 'we'. You want in on this?"

"Sure, if there's anything three-quarters of an attorney can do. I think it would be funnier than Hell." She swore badly, capitalizing the word.

Kim returned from the phone in the kitchenette, recovered his beer from the elephant, thanked the beast, and sprawled out on the rug.

Jesse practically assaulted him. "Well, come on—give!"

"OK, the guy I know in Computer Science says that he thinks he can get us what we need to do it. He's going to look into it and come over tomorrow."

"O frabjous day! Callooh! Callay!" Jesse exulted.

"Indeed," Kim said drily.

"Before you get too carried away, Kim, have you thought about what this might do to the data from the TV experiment? And what happens if we get caught?"

"Yes to both." So much for Lee and Kim's marriage. "All we've got to do is rig a subroutine that causes the output of the TV-processing program to include Thorsen's facing block at some point. The output is altered, but the input, the actual data, is unaffected, and they can clear things up afterwards."

I interrupted to tell him about the replacement of the block with Thorsen himself.

"Better yet. The Almighty on Mars." He sipped beer. "As for getting caught, we can set up the subroutine to commit hara kiri after its run. Poof! Up in a cloud of random numbers. I know that verges on mixed metaphor, Ardee. After the subroutine is gone, all that's left is the tiny insertion in the main program that calls the subroutine in the right circumstances, and that contains no account numbers or anything else to implicate us directly. . . .of course, suspicion is apt to be rather heavy."

"You're not British are you, Kim?"

He ignored me. "The only really hard part, aside from getting the subroutine to give a pretty picture, is getting the passwords that let us make that tiny insertion in the main program. But Georgie thinks he may be able to get ahold of them for us; his father is associate chairman of the department."

"Sounds almost foolproof," commented Lee. "And I think Jesse's right, Thorsen will love it, although it may be somewhat difficult to tell at first."

I took a couple of large swallows of beer. "Yeah. . .OK, let's do it."

"Okay." Jesse sounded surprised. She hadn't thought there was anything to be decided.

KIM'S TAME computer whiz came to the lab the next morning. The kid looked about twelve, all pimples and stringy hair, and mostly he looked down at his shoes and mumbled, but he seemed taken with Kim, and he provided the passwords we needed. Those, the dust-covered time-sharing remote computer terminal in the corner of the lab, and the programming expertise Kim had picked up as a math major before switching to exobiology were all we needed. A couple of weeks later, Kim had the subroutine written and was proudly displaying his work on the TV display of the terminal.

"Oh, it's beautiful, Kim." Jesse was ecstatic.

"It is, Kim," I agreed. "It's Thorsen right down to the ends of his pointy little mustache. And that's his supercilious head shake too."

"It is pretty good, isn't it." He was really pleased with himself. "Of course, getting it to look like

Thorsen was no real trick. The hard part was getting it to appear in the right place at the right time. For instance, I couldn't just have him appear centered in the picture, that might have made him look as if he were floating in the air. And if he simply appeared at some preset time he might suddenly pop into existence in front of some feature of the landscape. No, the way this works, the main program will report to the subroutine every hundred milliseconds. When the subroutine has gotten reports in a sequence that indicates that Marsman is breasting a hill, then it triggers, and Thorsen comes into view as we crest the hill, then vanishes a few seconds later. . .like that." He pointed to the TV display where the subroutine was running over and over, Thorsen appearing over the hill, shaking his head pityingly, then vanishing.

"Doesn't having the main program report to the subroutine require more than a 'tiny insertion'?" Jesse wanted to know.

"Only marginally; and the identifying information still self-destructs with the subroutine."

Jesse was grinning at the display again. "It's really perfect, just mimsy."

"Shouldn't he be a little nobler about the brow?" a voice behind us wanted to know. A familiar voice. Thorsen's voice.

Kim and I both froze. Jesse rallied to our aid:

"Oh, good, Dr. Thorsen. Take a look at this. We've been thinking of doing some promotional announcements for the educational channel about Marsman. You know: 'No telling what'll turn up on Mars. Don't miss Marsman.'" It was close enough to the truth that I cringed.

"With *my* face?"

"Well, naturally we needed someone distinctive looking—an ordinary face just wouldn't do."

"I'm pleased to see such initiative, but you'd better leave that sort of thing to the TV experimenters. Our own experiment is far more significant; see what you can dream up for that."

He left looking unconvinced but thoughtful. Kim killed the display on the screen, and as far as any of us knew that was the end of *that*.

EARLY THE NEXT morning Jesse stuck her head into the cubbyhole I used as an office.

"Thorsen wants us in his office. He wants to play speculations again."

"What's he doing here this time of day? It's only a little after eight."

"'Ours not to reason why'", she misquoted.

Kim was already there, perched on a window sill, mountains in

the background peaking over his shoulder. Thorsen sat with his feet up on the desk. Jesse sank gracefully to sit cross-legged on the carpet. I flopped into the only chair.

"All right, you've just been told that an animal about the size of a cat positively and for a fact exists on Mars. What's it look like? Hank, you start."

He was always picking on me in these sessions. The last one, a couple of weeks before, he'd wanted to know what numbering system intelligent Jovans were likely to use. I'd held out for binary, arguing that they'd most likely be built along the lines of fish, with bilateral symmetry. Everybody else held out for radial symmetry, like squids or octopus, and octal, decimal, or duodecimal. Apparently I was to be the goat again.

"Well, to begin with, the results from the Viking probes showed no lower order life, no plants, no smaller animals, no microorganisms."

"No detected microorganisms," Thorsen interrupted. "You're well aware that those experiments were neither conclusive nor in some cases even well conceived."

"No detected microorganisms," I corrected myself. "Nonetheless the TV experiments showed nothing analogous to terrestrial plants or animals, and without those to live on, and in fact a

whole ecological base to have evolved out of, more complex, larger animals are extremely unlikely."

"Correct, and I'd have been extremely perturbed had you failed to bring that up. However, you've been told that such an animal exists even so. What does it look like?"

"OK, say something on the order of a turtle. Low, close to the ground so the wind doesn't bother it, hard integument so the sandstorms don't scour it to death. Black or dark brown for camouflage from predators if there are any, and to absorb what little energy is available from the sun."

"Black will make it radiate better at night," Kim put in.

"Well, maybe it can change color then, but in the daytime it'll be black."

"What about locomotion," Thorsen wanted to know.

"Well, I'd say legs, or something very similar. Wings are obviously out, and sliding or gliding like a snake or snail wouldn't work well in that fine grit. Maybe six or eight of them, with broad, paddle-shaped ends to dig in and anchor."

"Any other limbs, Jesse?" Somebody else's turn now.

"Yes, two of those paddle-shaped feet modified to scoop sand into its mouth." She sounded certain.

"Why?"



"There are only three major sources of energy available to Myrtle: direct solar radiation, which is obviously inadequate, radioactive decay, of which there ain't that much there to decay, and other life forms, our as-yet-to-be-detected microorganisms. I therefore conclude that she makes her living by filtering smaller organisms out of the sand, like whales filter krill."

"You left one out," said Thorsen, and waited. Jesse looked puzzled.

"The wind," Kim helped out.

"Oh, yeah, sure, but I can't think of any likely way for an organism to use that. I mean martians with little windmills on top of their heads would never be

able to reproduce. They'd be too busy laughing at each other." She giggled, and rocked back onto her elbows.

"I agree windmills are impractical," Kim said, "But how about a sessile organism with thousands of tendrils waving around in the breeze, sort of like a sea anemone?"

"How does it get energy from that," Thorsen wanted to know.

"Say its got two kinds of tendrils, one impregnated with natural lodestone, the other with some sort of conductor. The tendrils are shaped so the flow around them is very turbulent, so when the wind blows over them they whip around and bingo, a natural generator."

"Lodestone isn't that common even on Earth," I put in to show I was listening.

"Make him self-energizing then, like a powerhouse generator, that way it wouldn't take much."

"It sounds pretty unlikely to me."

"Have you ever seen a hermit crab? Or a human being?"

"Let's hear some more about Hank's turtle," Thorsen ordered. "Head, sense organs, Jesse?"

"I'd say a retractible cluster of sense organs. That sort of thing isn't generally very durable. Probably something analagous to eyes, so Myrtle can stay in bright sunlight and avoid stepping into

puddles. . .of shadow, and a pair of antennae—feathery things, like a moth's—for detecting breezes. Probably they'd be as far apart as possible when extended to give the most directional information. Hearing would be useless, of course."

"Anything else, Kim? . . . Hank?"

"Well, it might be useful for it to be able to sense changes in atmospheric pressure, and maybe to smell water or whatever it uses for a solvent, but those functions could be in the antennae."

"OK. . .anybody want to add anything else?" He waited a few seconds. "What you've come up with is substantially the same as the result of my own thoughts." He fumbled around in the papers on his desk, then came up with a pencil drawing which he passed around. It showed a creature very similar to what we'd described.

Thorsen had been staring out the windows while we examined his drawing. When I put it back on his desk, he spoke, still staring out the window:

"It has come to my attention that some members of this group may have the capability to make alterations in the output of the television experiment on Marsman I." 'Come to his attention', indeed. I wondered how much he'd doped out for himself and how much he'd squeezed out of Ardee Weston. I was sure Ardee

was our weak link and sure Thorsen knew it. He looked around at each of us in turn.

"Possibly," I admitted. Jesse glared at me.

Thorsen looked back out the window again. "I wonder if any of you has fully comprehended the power you have at your disposal. Consider what the effect would be if rather than my humble self (!) the creature I have just shown you were to be 'sighted' on Mars by Marsman. Life on Mars! And not just some boring little bacteria only people like us care about, but something big enough to see and strange enough to excite. At the least, the very least (*He* was beginning to sound excited!) it would assure the launching of further Marsmen. And I think the odds are excellent that it would trigger completion of *Ares* and *Stalin*. The cold detente is just starting to heat up, and a joint manned Mars mission could be just the thing to fan the flames. But the citizens of neither country would pay for it without there being something up there to excite their interest." He had a strange look in his eyes, a dreamy look I had never seen before. All at once, I realized: *I'll be damned, the Almighty wants to be an astronaut*. But if he could get the manned mission revived, he probably had a pretty good chance; he was about the top exobiologist in the country. A lot of

other things fell into place too. All that jogging he did, for instance, and that biplane he was so fond of buzzing football games in. But he was still talking:

"We've been tending to turn more and more inwards the last decade. There's been little in space to capture the public's imagination so appropriations have been waning. We must do something like this to turn attention outwards or mankind will remain forever earthbound." He realized he was getting uncharacteristically poetic, and turned toward Kim briskly. "Well, Kim? I think you are probably handling the nuts and bolts of this."

Kim looked at Jesse and me, then replied. "Sure, we can do it, but why not go all the way, have John Carter gallop up on a thoot?"

"Don't be ridiculous."

"The whole idea is ridiculous. Do you really think that if something like this," he brandished the drawing he'd picked up from the desk, "wanders across the landscape the actual data from Marsman won't be checked and rechecked, processed and reprocessed, trying to get every possible shred of detail? And that when it is, the hoax won't be discovered, and the whole space research program totally discredited. Then watch your appropriations wane!" Kim was as angry as I'd ever seen him.

"I've considered that with the

most extreme care, Kim, and I feel that the chances of our being found out are very small." He grinned. "I had a few drinks with the chairman of the Computer Science department at the faculty club last night. Once the data from Marsman is in the computer, there's literally nothing that can't be done to it while its still in the computer. No one will ever examine data of any sort except that provided by the computer. And consider human nature. The people running the TV experiment won't doubt their own machine, especially when its putting out exactly what they'd most hoped to see. No, Kim, I think we're safe."

"But its criminal, deliberately falsifying data that way."

"In a moral sense, you're right of course, and that point bothered me more than any other. Its against every principle I was taught and believe, but I think in this one case the advancement of science requires the violation of its principles."

"'Violation' is right," Kim said.

"Doc, just how badly do you want to go to Mars," I asked.

He looked surprised and a little angry. "Your perception amazes me, Hank, but if you're implying that I'm advocating this merely because I want to go to Mars, you're absolutely wrong. Even if I knew right now that the only effect would be to cause the launch-

ing of more Marsmen, I'd still want to follow this course."

"But you still haven't answered my question."

"How badly do I want to go to Mars?" He looked embarrassed and turned to stare out the window again. "More than anything at all."

"Then I think we should do it."

"Me too," Jesse echoed.

It took us three more days, working in shifts, to convince Kim to help us. He put up moral arguments, ethical arguments, technical arguments, and practical arguments, but in the end, he yielded.

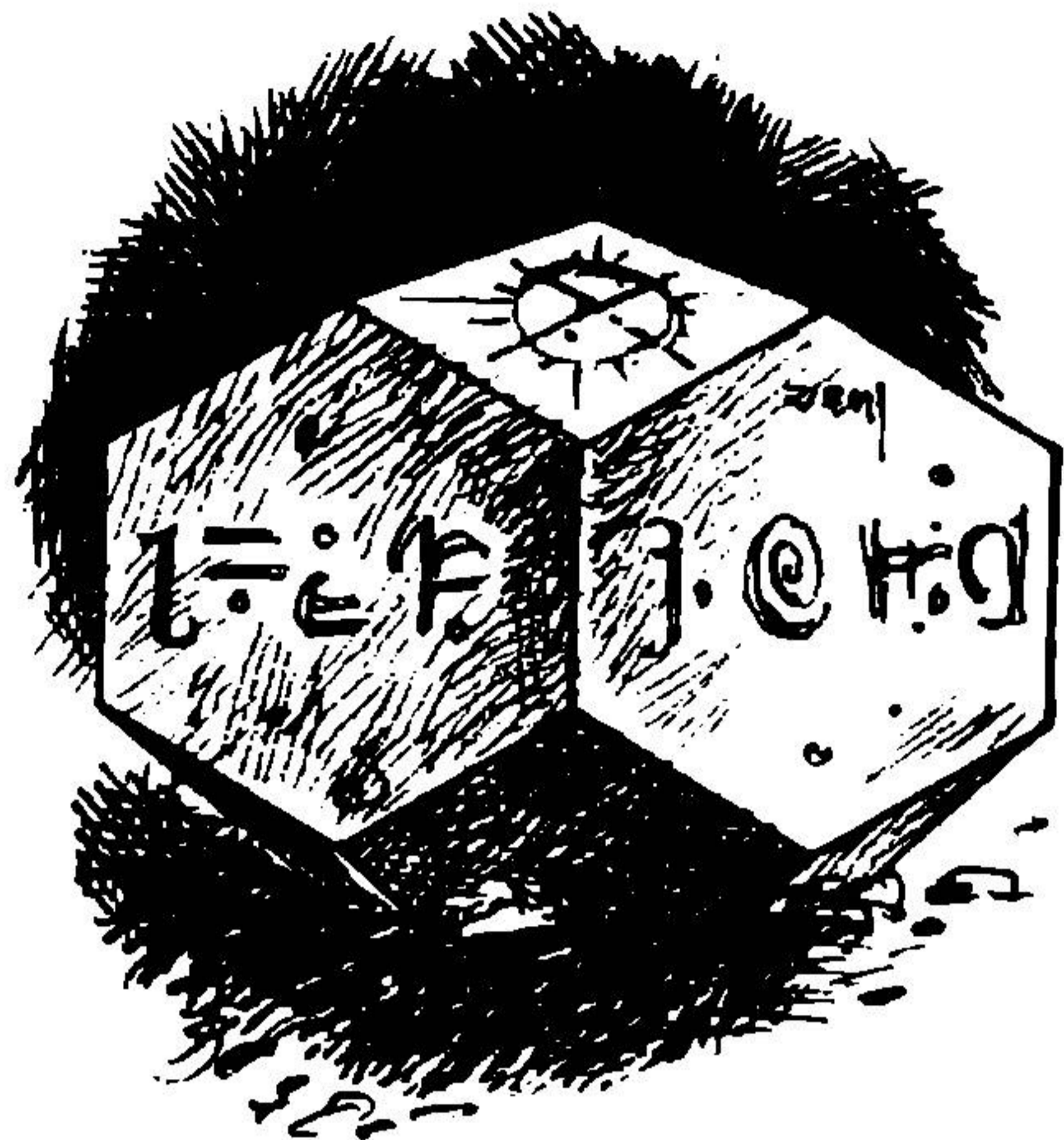
And he did a beautiful job. It was 6 a.m. here, but a little before noon ("Don't want to have to worry about shadows.") in Solis Lacus on the sixth day after Marsman landed. A light sandstorm ("Or tracks.") had come up earlier in the morning, and the duty engineer on Earth was alternately yawning and staring at the TV screen trying to decide whether to tell Marsman to go into resting mode until it passed. The screen showed the boulder field Marsman's dog brain was guiding it thru. Suddenly out from behind one of the boulders churned Myrtle, all eight legs paddling sand for all they were worth, apparently flushed by Marsman. It almost immediately disappeared behind another boulder, and was seen no more.

Marsman hadn't been programmed to go chasing after things, even things as interesting as that (oh, vain regrets!), so he took no notice, and by the time his masters could get word to him to go back for another look no trace could be found. It was very convincing, and like I said, a beautiful job.

Unfortunately it wasn't enough. The papers the next day had 'Mars Turtle Found' in four-inch type, all right, and a fuzzy photo of Myrtle, but the next day it was half-inch type on page four, and the day after that, interviews with scientists on page nineteen, and within a week it was forgotten by the public. No manned mission, no more Marsmen, no more money.

Things were very gloomy around the lab after that. Thorsen tried to take it philosophically: "We just underestimated the public's capacity for apathy. We didn't capture their imaginations."

But four weeks later the Solis Lacus Plinth did. Jesse came tearing into the lab to get Kim and me, and we all ran down to Thorsen's office. The bulletin was playing over and over on all the networks. A three meter cube of quartz, half drifted over with sand, once deeply carved, now worn almost smooth by the ceaseless action of the wind and sand over the weary eons. They'd moved Marsman up close, and



you could see the sand and wind eddying around it, and the carving, very faint, but almost, almost intelligible. The hackles on the back of my neck rose. Even Thorsen was speechless.

Funds for more Marsmen were voted almost that night, and construction resumed on *Ares* and *Stalin* the following morning. So Thorsen got what he wanted after all. He's scheduled to land with the first group next month. They're planning to set down in Solis Lacus, where Marsman I finally conked out, near where the Plinth is supposed to be.

But I wonder . . .

★